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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/593,358      | 06/14/2000  | Willard L. Hofer     | MICS.0053           | 8367             |

7590 12/03/2002

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|               |
|---------------|
| EXAMINER      |
| NGUYEN, JIMMY |

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
| 2829     |              |

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/593,358

Applicant(s)

HOFER ET AL.

Examiner

Jimmy Nguyen

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 9/9/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Response to Argument**

The response filed 9/18/02 has been carefully considered with the following effect;

The examiner agrees on the argument of the Sundar et al (6283701) reference, on the other hand, the examiner disagrees on the secondary reference of Matsukawa et al (US 5518542). Matsukawa et al teach (fig 7) the holding structure 911a, 111b) arranged to hold the wafer and rotate the wafer as disclosed in column 6 line 51 – 64. The arm-rotating shaft 102 will rotate the section 110 and the holding arms 111a and 111b.

Regarding the rotation of the first axis, upon further search the examiner makes new rejection as below.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker et al (US 6186873) in view of Matsukawa et al (US 5518542)

**Regarding claim 1**, Becker et al disclose (fig 1)

A holding structure (10) having members (93) arranged to hold and rotate (column 2, line 30 –33 and column 2 line 51 –55, it is driven by tow idler gears 14, 15, 12) the substrate (20) about a first axis, the holding structure (10) being coupled to a rotatable member

However, Becker et al is silent on the rotatable member configured to rotate the holding structure about a second axis different from the first axis.

On the other hand, Matsukawa et al teach on the rotatable member configured to rotate the holding structure ( 111a, 111b) about a second axis (flipping) different from the first axis for the purpose of providing the ability for testing system to test the wafer from different angle.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the robots arm of Sundar et al and providing the flipping feature as taught by Matsukawa et al for the purpose of providing the ability for testing system to test the wafer from different angle

**Regarding claim 2**, Becker et al discloses (fig 1) the members (93) comprises a plurality of wedge assemblies (15, 12) configured to rotate the substrate (20) about the first axis

**Regarding claim 3**, Becker et al discloses (fig 1) the first axis is disposed generally perpendicular to a flat surface of the substrate (20) and extends generally through an axial center of the substrate.

**Regarding claim 4**, Matsukawa et al discloses (fig 12) the holding structure comprises two L shaped gripping arms (111a, 111b) arranged to form a single U shape and configured to hold the substrate substantially parallel to the gripping arms

**Regarding claims 5,6**, Matsukawa et al discloses the U shaped structure is configured to open and close about the perimeter of the substrate (W)

**Regarding claim 7**, Becker et al discloses (fig 1) the holding structure (10) comprises three wedge assemblies (15, 14, 12), at least one wedge assembly coupled to a motor (not shown, column 2 line 51 - 55). and configured to rotate the substrate (20) about the first axis disposed generally perpendicular to a flat surface of the substrate (20) and extending generally through an axial center of the substrate.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen at (703) 306-5858. Any inquiry of a General nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.

JN.  
Nov 20, 2002

  
**KAMAND CUNEO  
SUPERVISORY PATENT EXAMINER  
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